

What is claimed is:

1. A method for reducing the level of poultry contamination resulting from the processing of poultry, wherein the processing includes the steps of scalding, picking, eviscerating, washing, rinsing and chilling said poultry, the method for reducing the level of poultry contamination comprising the steps of:
  - adding chloramines as a disinfectant to process water used in at least one of said processing steps; and
  - using said disinfected process water at least one of said processing steps, thereby reducing the level of contamination of the poultry at each of said treated processing steps.
2. The method according to claim 1 wherein said chloramines are comprised of monochloramine or any combination of monochloramine and dichloramine.
3. The method according to claim 1 wherein said chloramines are comprised of a combination of monochloramine and dichloramine in a ratio of about 1:0 to about 1:1.
4. The method according to claim 3 wherein said chloramines are introduced into said aqueous medium where said aqueous medium has a desired pH range to control said ratio of monochloramine to dichloramine.
5. The method according to claim 1 wherein said chloramines are present within said aqueous medium in nominally equimolar concentrations of monochloramine, dichloramine and free chlorine.
6. The method according to claim 1 wherein said aqueous medium contains residual monochloramine.
7. The method according to claim 1 wherein disinfection of the aqueous medium is to accomplish pathogen control.
8. The method according to claim 1 wherein disinfection of the aqueous medium is to accomplish preservation of the useful life of the poultry.

9. In a method for processing poultry comprising the steps of scalding, picking, eviscerating, washing, rinsing and chilling said poultry using a process for disinfecting a recyclable aqueous medium, said process for disinfecting comprising the steps of:

recovering at least a portion of the aqueous medium from a processing step;

5 filtering said recovered aqueous medium to remove particulate matter;

disinfecting said aqueous medium with a highly reactive oxidant such as ozone;

introducing chloramines to the finished water to provide antimicrobial residual; and

reusing said recovered, filtered, disinfected and chloraminated aqueous medium in a poultry processing step.

10 10. The method according to claim 9 further comprising a step of controlling the pH level of said disinfected process water.

11. The method according to claim 9 wherein said chloramines are comprised of  
15 monochloramine or any combination of monochloramine and dichloramine.

12. The method according to claim 9 wherein said chloramines are comprised of a combination of monochloramine and dichloramine in a ratio of about 1:0 to about 1:1.

20 13. The method according to claim 12 wherein said chloramines are introduced into said aqueous medium where said aqueous medium has a desired pH range to control said ratio of monochloramine to dichloramine.

25 14. The method according to claim 9 wherein said chloramines are present within said aqueous medium in nominally equimolar concentrations of monochloramine, dichloramine and free chlorine.

15. The method according to claim 9 wherein said process water contains residual monochloramine.

30 16. The method according to claim 9 wherein disinfected process water is used to accomplish pathogen control.

17. The method according to claim 9 wherein disinfected process water is used to accomplish preservation of the useful life of the poultry.

18. A method for reducing the level of poultry contamination resulting from the processing of poultry, wherein the processing of said poultry includes the steps of scalding, picker, post-pick, washer, rinsing and chilling, the method comprising the steps of:  
recovering water used during at least one of said poultry processing steps;  
treating said recovered water with chloramines and controlling the pH of said recovered water to reduce microorganisms therein; and  
reintroducing said treated recovered water into at least one processing step which uses heated water, whereby the combination of said treated water and said heated water reduces the level of microorganisms within said poultry.

19. The method according to claim 18 wherein said chloramines are comprised of monochloramine or any combination of monochloramine and dichloramine.

20. The method according to claim 18 wherein said chloramines are comprised of a combination of monochloramine and dichloramine in a ratio of about 1:0 to about 1:1.

21. The method according to claim 20 wherein said chloramines are introduced into said aqueous medium where said aqueous medium has a desired pH range to control said ratio of monochloramine to dichloramine.

22. The method according to claim 18 wherein said chloramines are present within said aqueous medium in nominally equimolar concentrations of monochloramine, dichloramine and free chlorine.

23. The method according to claim 18 wherein said treated recovered water contains residual monochloramine.

24. The method according to claim 18 wherein a primary disinfection step of the recovered process water is accomplished by a highly reactive disinfectant before the introduction of chloramines.

25. The method according to claim 18 wherein chloramines are introduced for pathogen control.

5 26. The method according to claim 18 wherein chloramines are introduced for food preservation.

27. A system for reducing the level of poultry contamination resulting from poultry processing including the steps of scalding, picker, post-pick, washer, rinsing and  
10 chilling, the system including a water reuse and disinfection method, the water reuse method comprising the steps of:

recovering water used during at least one of said poultry processing steps;

treating said recovered water with chloramines to reduce the level of microorganisms therein; and

15 reintroducing said treated water into at least one of said poultry processing steps which uses heated water;

the disinfection method comprising the steps of:

adding a chloramines to water used in said poultry processing steps; and

20 using said disinfected water in at least one of said poultry processing steps which uses heated water, whereby the combination of said reuse water, said heated water and said disinfected water in said poultry processing steps reduces the level of microorganisms within said poultry.

28. In a method for food processing comprising the use of an aqueous medium  
25 said food processing using a process for disinfecting said aqueous medium and food stuffs, said process for disinfecting comprising the steps of:

recovering at least a portion of the aqueous medium from a processing step;

filtering said recovered aqueous medium to remove particulate matter;

30 treating said aqueous medium by introduction of chloramines within said aqueous medium; and

reusing said filtered recovered aqueous medium in a processing step.

29. The method according to claim 28 wherein a primary disinfection step of the recovered process water is accomplished by a highly reactive disinfectant before the introduction of chloramines.

5 30. A method for food processing or preservation comprising the steps of:  
injecting selected levels of chloramines within a water supply;  
freezing said chloraminated water thereby forming ice containing said  
selected levels of chloramines; and  
10 using said chloraminated ice to preserve food products or for pathogen control.

31. A method for pathogen reduction in food stuffs within food product processing comprising the steps of:  
providing an aqueous medium that comes in contact with food stuffs within said  
15 food product processing  
treating said aqueous medium by the introduction of chloramines said chloramines reducing pathogens within foodstuffs within said food product processing.

20 32. The method according to claim 31 wherein said chloramines are selected for the group consisting of monochloramine and dichloramine.

33. The method according to claim 32 wherein said monchloramine and dichloramine are used in combination with each other.

25 34. The method according to claim 33 wherein said combination of monochloramine and dichloramine is in a ratio of about 1:0 to about 1:1.

35. The method according to claim 34 wherein said aqueous medium has selected pH range to control said ratio of monochloramine to dichloramine.

30 36. The method according to claim 31 wherein said chloramines are present within said aqueous medium in nominally equimolar concentrations of monochloramine, dichloramine and free chlorine.

37. The method according to claim 31 wherein said aqueous medium contains residual monochloramine.

38. The method according to claim 31 wherein disinfection of the aqueous medium and food stuffs increases preservation of food products.

39. A method of using monochloramine and dichloramine and combinations thereof as an antimicrobial agent in organically laden waters found in food washing and processing applications.

40. The method according to claim 39 wherein said organically laden waters are in a chiller tank in a poultry processing plant.

41. The method according to claim 39 wherein said organically laden waters are in a scalding tank in a poultry processing plant.

42. The method according to claim 39 wherein said organically laden waters are used to disinfect cooked packed products.

43. A method for reducing the level of poultry contamination resulting from the scalding processing step or any other processing step which uses heated water, the method comprising the treatment of the heated water in the scalding or other heated processing step or make-up water that will enter the heated processing water with chloramines to reduce the level of microorganisms therein.

44. A method of application for using monochloramine and dichloramine and combinations thereof as an antimicrobial agent for pathogen control or to increase preservation of food stuffs by means of an electrostatically accelerated spray.

45. A method of application for using monochloramine and dichloramine and combinations thereof as an antimicrobial agent for pathogen control or to increase preservation of foodstuffs by means of a fogging mist.

46. A method of application for using monochloramine and dichloramine and combinations thereof as an antimicrobial agent for pathogen control or to increase preservation of foodstuffs by means of a high retention foam.